



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

[Handwritten mark]

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/525,600	02/22/2005	Wilhelm Stastny	P/4073-3	6068
2352 7590 10/02/2007 OSTROLENK FABER GERB & SOFFEN 1180 AVENUE OF THE AMERICAS NEW YORK, NY 100368403			EXAMINER KERNS, KEVIN P	
			ART UNIT 1725	PAPER NUMBER
			MAIL DATE 10/02/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/525,600

Applicant(s)

STASTNY ET AL.

Examiner

Kevin P. Kerns

Art Unit

1725

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 February 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 8/24/07.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the outer holding pipes". There is insufficient antecedent basis for this limitation in the claim. In this instance, it is believed that the term "outer" should be deleted to obtain proper antecedent basis.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1, 5, 20-23, 25, and 27 are rejected under 35 U.S.C. 102(e) as being anticipated by Korbik et al. (US 6,843,958).

As to claims 1, 22, and 23, Korbik et al. disclose a metallurgical furnace comprising a casing of the furnace and the outer casing plate, a cooling plate (10) of

Art Unit: 1725

copper provided inward of the outer furnace casing plate (15). A cooling passage with holding pipes (16) thereon which lead to the outside through the furnace casing plate with securing elements. The securing element is a fixed-point securing element (11). As to claim 5, the holding pipe (16) surrounds a cooling pipe section (14). As to claims 20, 21, 25, and 27, the apparatus comprises a moveable point securing element (12) above and to the left the fixed-point securing element (11) (Figure 1).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 6-15 and 17-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korbik et al. (US '958).

Korbik et al. disclose the claimed invention above, but lack the mentioning of flanges and disk used between the holding pipes and the cooling pipe sections.

As to claims 6-15 and 17-19, it is conventional in the art to have connecting pieces, flanges, provided between the holding pipe and cooling pipe sections. The cooling pipe connects to the cooling pipe holder by the usage of a flange in order to provide a good seal and prevent water leakage.

8. Claims 2, 3, 16, 24, and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Korbik et al. (US '958).

Korbik et al. disclose the claimed invention above, but lack the mentioning of the cooling plate height/width ratio of <3 . However, it would have been obvious to design a cooling plate with a height/width ratio of <3 , since this would depend on the size and construction of the furnace. The cooling plate should conform to the size and shape of the furnace. Therefore, designing a plate with a height/width ratio of <3 is merely a design choice.

9. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Korbik et al. (US 6,843,958) in view of Stein (US 5,904,893).

Korbik et al. disclose the claimed invention above, but fail to teach a web and groove on the side of the cooling plate.

Art Unit: 1725

However, Stein discloses webs and grooves on the interior of the cooling plate (Figure 2) for the purpose of cooling the furnace effectively.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to have webs and grooves as taught by Stein, in Korbik et al., in order to promote effective cooling to the furnace.

Response to Arguments

10. The examiner acknowledges the applicants' amendment received by the USPTO on August 17, 2007. In addition, an Information Disclosure Statement (IDS) received on August 24, 2007 has been considered and initialed, and a copy is provided with this Office Action. The applicants' amendment to independent claim 1 raises a new rejection under 35 USC 112, 2nd paragraph (see above section 2). Claims 1-27 remain under consideration in the application.

11. Applicants' arguments filed August 17, 2007 have been fully considered but they are not persuasive.

With regard to the applicants' remarks/arguments on pages 8-10 of the amendment, it is noted that the applicants have set forth the advantages of their invention in the bottom portion of page 8, and have set forth the teachings of Korbik et al. in the 1st full paragraph on page 9 of the remarks section. Regarding the applicants' major arguments against the teachings of Korbik et al. with respect to the applicants' claims (on the bottom of page 9 and top of page 10 of the remarks), the applicants state

Art Unit: 1725

that "Korbik does not disclose or suggest holding pipes and securing elements securing the cooling plate via the holding pipes to the outer casing plate, the holding pipes and securing elements comprised of a material with a greater strength than the copper or low-alloy copper alloy of the cooling plate" (independent claim 1), and that "Korbik does not disclose or suggest securing elements comprised of a material with a higher strength than the copper or low-alloy copper alloy of the cooling plate for securing the cooling plate to the outer furnace casing plate via the holding pipes" (independent claim 22). Furthermore, the applicants state that Korbik et al. do not disclose/suggest relative strengths of metals or other materials used in the furnace, as well as dispute that the compensator 16 of Korbik et al. is not a "holding pipe", as stated by the examiner. The examiner respectfully disagrees with these arguments, as holding pipes and securing elements inherently would be made of a stronger material, such as iron or steel, than the copper or low-copper alloy of the cooling plate. The cooling plate would be made of a copper material for improved thermal conductivity to effect enhanced cooling, but any "securing elements" (e.g. bolts, screws etc.) and a "holding pipe" would necessarily need to have higher strength and resistance to stresses that would increase deformation caused by a high temperature environment. As a result, relative strengths of metals used in the furnace are disclosed and/or inherent features within the teachings of Korbik et al., and thus independent claims 1 and 22 (and a portion of the claims dependent therefrom) remain rejected under 35 USC 102(e). Regarding the compensator 16 of Korbik et al., this element indeed acts as a "holding pipe" and at least partially has a "securing" function, similar to the feature (compensator 11)

Art Unit: 1725

disclosed by the applicants (see Figures 1 and 2 of application). Finally, it is noted that the applicants did not specifically address the 35 USC 103(a) rejections based on Korbik et al. alone (see above sections 7 and 8), as well as Korbik et al. in view of Stein (see above section 9). As a result, claims 1-27 remain rejected.

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dr. Kevin P. Kerns whose telephone number is (571) 272-1178. The examiner can normally be reached on Monday-Friday from 8:00am-5:00pm.

Art Unit: 1725

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jonathan Johnson can be reached on (571) 272-1177. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Kevin P. Kerns *Kevin Kerns* 9/28/07
Primary Examiner
Art Unit 1725

KPK

kpk

September 28, 2007